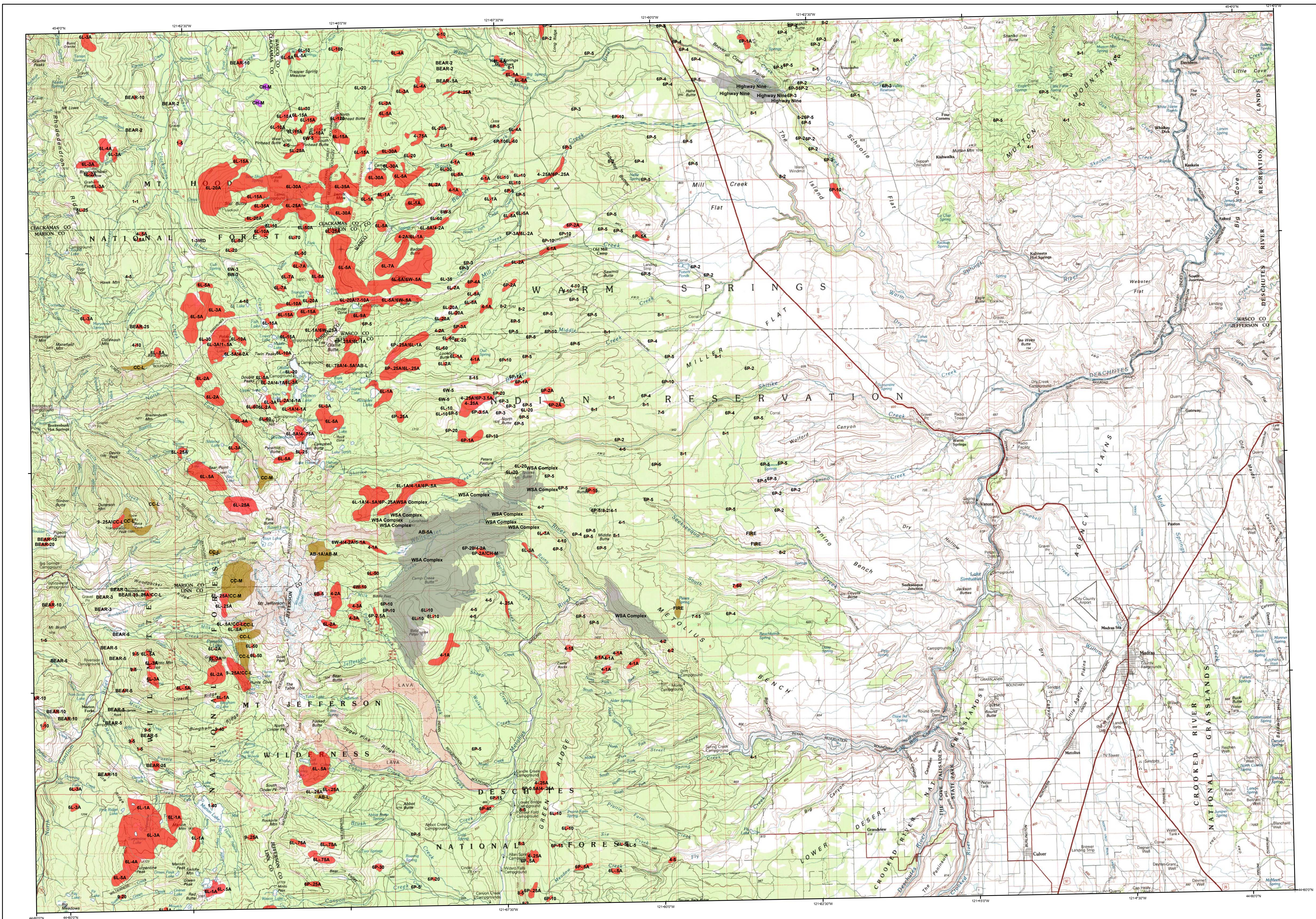


2007 Aerial Insect and Disease Survey

USGS 100K Quad: Madras - E144121; 41



| Defoliators | |
|-------------|-----------------------------|
| Code | Damaging Agent |
| AS | Spruce aphid |
| BB | Western blackheaded budworm |
| BM | Modoc budworm |
| BP | Sugar pine tortrix |
| BS | Western spruce budworm |
| BY | Bynum's light/Lophodermella |
| CH | Larch |
| HL | Western hemlock looper |
| LG | Green striped forest looper |
| LL | Larch looper |
| LS | Black pine needle scale |
| MD | Douglas fir budmoth |
| ML | Larch budmoth |
| MN | Douglas fir needle midge |
| MS | Spruce budmoth |
| ND | Needle miner |
| NJ | Needle miner |
| NK | Needle miner |
| NL | Needle miner |
| NM | Needle miner |
| NP | Needle miner |
| NS | Needle miner |
| NT | Needle miner |
| NW | Needle miner |
| CL | Western oak looper |
| PB | Pine butterfly |
| PC | Pine needle cast |
| PH | Phantom hemlock looper |
| PM | Pandora moth |
| PN | Pine needles/needle miner |
| PS | Pine needle scale |
| PC | Needle cast |
| SD | Needle mine |
| SA | Sawfly |
| SD | Sawfly |
| SH | Sawfly |
| SK | Sawfly |
| SL | Sawfly |
| SM | Satin moth |
| SN | Swiss needle cast |
| SP | Sawfly |
| SW | Swiss needle cast |
| TA | Tent caterpillar, aspen |
| TC | Tent caterpillar, other |
| TM | Douglas fir tussock moth |
| TS | Tent caterpillar, aspen |

| Mortality Agents | |
|------------------|----------------------------|
| Code | Damaging Agent |
| 1 | Douglas fir beetle |
| 2 | Douglas fir engraver |
| 3 | Spruce beetle |
| 4 | True fir |
| 5 | Western balsam bark beetle |
| 6 | Mountain pine beetle |
| 6B | Mountain pine beetle |
| 6C | Mountain pine beetle |
| 6D | Mountain pine beetle |
| 6E | Mountain pine beetle |
| 6F | Mountain pine beetle |
| 6G | Mountain pine beetle |
| 6H | Mountain pine beetle |
| 6I | Mountain pine beetle |
| 6J | Mountain pine beetle |
| 6K | Mountain pine beetle |
| 6L | Mountain pine beetle |
| 6M | Mountain pine beetle |
| 6N | Mountain pine beetle |
| 6O | Mountain pine beetle |
| 6P | Mountain pine beetle |
| 6Q | Mountain pine beetle |
| 6R | Mountain pine beetle |
| 6S | Mountain pine beetle |
| 6T | Mountain pine beetle |
| 6U | Mountain pine beetle |
| 6V | Mountain pine beetle |
| 6W | Mountain pine beetle |
| 6X | Mountain pine beetle |
| 6Y | Mountain pine beetle |
| 6Z | Mountain pine beetle |
| 7 | Isis spp. |
| 8 | Western pine beetle |
| 9 | Western pine beetle |
| 10 | Western pine beetle |
| 11 | Western pine beetle |
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| 97 | Western pine beetle |
| 98 | Western pine beetle |
| 99 | Western pine beetle |
| 100 | Western pine beetle |

| Other Damaging Agents | |
|-----------------------|-----------------------------|
| Code | Damaging Agent |
| AB | Balsam woolly adelgid |
| AC | Conifer spruce gall adelgid |
| AD | Leaf discoloration |
| AE | Blister rust |
| AF | Cystospora canker |
| AG | Dying hemlock |
| AH | Fine |
| AI | Gouty pitch midge |
| AJ | Hail |
| AK | Hardwood decline |
| AL | Aspen not from |
| AM | No damage detected |
| AN | Pacific madrone decline |
| AO | Leaf rust in poplars |
| AP | Red-bellied |
| AQ | Slide |
| AR | Unknown defoliation |
| AS | Unknown mortality |
| AT | Water damage |
| AW | Wind |
| AX | Winter damage |
| AY | Winter damage |
| AZ | Winter damage |

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| Code | Primary Host |
| 1 | Spruce, Douglas fir |
| 2 | True fir |
| 3 | Five-needle pines |
| 4 | True fir |
| 5 | Hemlock |
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